

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A variable gain amplification circuit comprising:
a signal generator ~~that has~~ having an output terminal ~~and is able to vary an output~~
amplitude;
a variable capacitor connected ~~between~~ to said the output terminal ~~and an AC grounded~~
terminal; and
a control circuit ~~for controlling~~ operable to control the an output amplitude of the said
signal generator[[,]] and a capacitance of the said variable capacitor.
2. (Currently Amended) A variable gain amplification circuit as defined in Claim 1,
wherein said signal generator ~~has~~ includes a variable resistor at an output load part
thereof.
3. (Currently Amended) A variable gain amplification circuit as defined in Claim 1,
wherein said signal generator ~~has~~ includes a variable inductor at an output load part
thereof.
4. (Currently Amended) A variable gain amplification circuit as defined in Claim 1,
wherein said signal generator comprises:
a variable gain mixer having a first input terminal and a second input terminal;
an RF signal source connected to the said first input terminal of the said variable gain
mixer; and

an LO signal source connected to ~~the~~ said second input terminal of ~~the~~ said variable gain mixer.

5. (Previously presented) A variable gain amplification circuit as defined in Claim 1, wherein said signal generator comprises:

a variable gain amplifier having a first input terminal; and

an RF signal source connected to the first input terminal of the variable gain amplifier.

6. (Original) A variable gain amplification circuit as defined in Claim 4, wherein said variable gain mixer is a single balanced mixer or a double balanced mixer.

7. (Original) A variable gain amplification circuit as defined in Claim 5, wherein said variable gain amplifier is a source grounded amplifier.

8. (Currently Amended) A variable gain amplification circuit as defined in Claim 1, wherein said variable capacitor ~~is constituted by~~ includes a circuit comprising at least two capacitors placed in parallel ~~between the first terminal and the second terminal~~, and at least one switch connected to an end of one of said at least two capacitors; and

wherein the capacitance of said variable capacitor ~~between the first terminal and the second terminal~~ is varied by ON/OFF of said at least one switch.

9. (Currently Amended) A variable gain amplification circuit as defined in Claim 1, wherein said variable capacitor ~~has~~ includes a capacitor and a MOS device whose gate

terminal is connected to the said capacitor ~~capacitor, between a third terminal and a fourth terminal~~; and

wherein the capacitance of said variable capacitor ~~between the third terminal and the fourth terminal~~ is varied by a bias voltage supplied to the said gate terminal of the said MOS device.

10. (Currently Amended) A variable gain amplification circuit as defined in Claim 2, wherein said variable resistor ~~is constituted by~~ includes a circuit comprising at least two resistors placed in parallel ~~between the first terminal and the second terminal~~, and at least one switch connected to an end of one of said at least two resistors; and

wherein the resistance ~~between the first terminal and the second terminal~~ of said variable resistor is varied by ON/OFF of said at least one switch.

11. (Currently Amended) A variable gain amplification circuit as defined in Claim 3, wherein said variable inductor is constituted by a circuit comprising at least two inductors placed in parallel ~~between the first terminal and the second terminal~~, and at least one switch connected to an end of one of said at least two inductors; and

wherein the inductance ~~between the first terminal and the second terminal~~ of said variable inductor is varied by ON/OFF of said at least one switch.

12. (Currently Amended) A variable gain amplification circuit as defined in Claim 1, wherein said control circuit controls the said variable capacitor so that the a cutoff frequency or resonance frequency of the said signal generator becomes constant.

13. (Previously presented) A variable gain amplification circuit as defined in Claim 4, wherein said RF signal source has a signal band equal to or larger than 100MHz.

14. (Original) A variable gain amplification circuit as defined in Claim 4, wherein said variable gain mixer is a down conversion mixer.

15. (Previously presented) A variable gain amplification circuit as defined in Claim 5, wherein said RF signal source has a signal band equal to or larger than 100MHz.